getline()

```
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str

streambuf

ab\n
cd\n
ef\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str

streambuf | a | b | \n | c | d | \n | e | f | \n | | |

ab\n
cd\n
ef\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str

a	b	\0	

streambuf

c	d	\n	e	f	\n					

```
ab\n
cd\n
ef\n
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str

c	d	\0	

streambuf

e	f	\n									

ab\n
cd\n
ef\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```cpp
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str | e | f | \0 | |

streambuf | | | | | | | | | | |

ab\n
cd\n
ef\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str

streambuf

ab\n
cd\n
ef\n

File

inFile.good()	false
inFile.eof()	true
inFile.fail()	true
inFile.bad()	false

```
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str

streambuf

ab\n
cd\n
ef\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```cpp
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str | | | | |

streambuf | a | b | \n | c | d | \n | e | f | | | |

File

ab\n
cd\n
ef

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str | a | b | \0 | |

streambuf | c | d | \n | e | f | | | | | | |

ab\n
cd\n
ef

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str

c	d	\0	

streambuf

e	f									

```
ab\n
cd\n
ef
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str | e | f | \0 | |

streambuf | | | | | | | | | | | |

```
ab\n
cd\n
ef
```

File

inFile.good()	false
inFile.eof()	true
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
inFile.getline( str, 4, '\n' );
```

str

streambuf

ab\n
cd\n
ef

File

inFile.good()	false
inFile.eof()	true
inFile.fail()	true
inFile.bad()	false

Stream Extraction Operator >>

```cpp
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str

streambuf

ab\n
cd\n
ef\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str

streambuf

a	b	\n	c	d	\n	e	f	\n		

ab\n
cd\n
ef\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```cpp
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str

a	b	\0	

streambuf

\n	c	d	\n	e	f	\n				

```
ab\n
cd\n
ef\n
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str | c | d | \0 | |

streambuf | \n | e | f | \n | | | | | | | |

ab\n
cd\n
ef\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```cpp
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str | e | f | \0 | |

streambuf | \n | | | | | | | | | | |

ab\n
cd\n
ef\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str | \0 | | | |

streambuf | | | | | | | | | | | |

ab\n
cd\n
ef\n

File

inFile.good()	false
inFile.eof()	true
inFile.fail()	true
inFile.bad()	false

```cpp
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str

streambuf


```
ab\n
cd\n
ef
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str

streambuf

a	b	\n	c	d	\n	e	f			

```
ab\n
cd\n
ef
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str | a | b | \0 | |

streambuf | \n | c | d | \n | e | f | | | | | |

```
ab\n
cd\n
ef
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str | c | d | \0 | |

streambuf | \n | e | f | | | | | | | | |

ab\n
cd\n
ef

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str | e | f | \0 | |

streambuf | | | | | | | | | | | |

ab\n		inFile.good()	true
cd\n		inFile.eof()	true
ef		inFile.fail()	false
		inFile.bad()	false

File

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str | \0 | | | |

streambuf | | | | | | | | | | | | |

ab\n
cd\n
ef

File

inFile.good()	false
inFile.eof()	true
inFile.fail()	true
inFile.bad()	false

```
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number

streambuf

```
12\n
34\n
56\n
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```cpp
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number [   ]

streambuf | 1 | 2 | \n | 3 | 4 | \n | 5 | 6 | \n | | |

12\n
34\n
56\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number | 12 |

streambuf | \n | 3 | 4 | \n | 5 | 6 | \n | | | | |

```
12\n
34\n
56\n
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number | 34

streambuf | \n | 5 | 6 | \n | | | | | | | |

```
12\n
34\n
56\n
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number | 56 |

streambuf | \n | | | | | | | | | | |

```
12\n
34\n
56\n
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number | 56 |

streambuf | \n | | | | | | | | | | |

```
12\n
34\n
56\n
```

File

inFile.good()	false
inFile.eof()	true
inFile.fail()	true
inFile.bad()	false

```
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number ⬚

streambuf ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚

```
12\n
34\n
56
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number

| 1 | 2 | \n | 3 | 4 | \n | 5 | 6 | | | |

streambuf

```
12\n
34\n
56
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number | 12 |

streambuf | \n | 3 | 4 | \n | 5 | 6 | | | | | |

```
12\n
34\n
56
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```cpp
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number | 34 |

streambuf | \n | 5 | 6 | | | | | | | | |

```
12\n
34\n
56
```

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```cpp
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```

number | 56

streambuf | | | | | | | | | | | |

```
12\n
34\n
56
```

File

inFile.good()	true
inFile.eof()	true
inFile.fail()	false
inFile.bad()	false

```
int number;
inFile >> number;
inFile >> number;
inFile >> number;
inFile >> number;
```
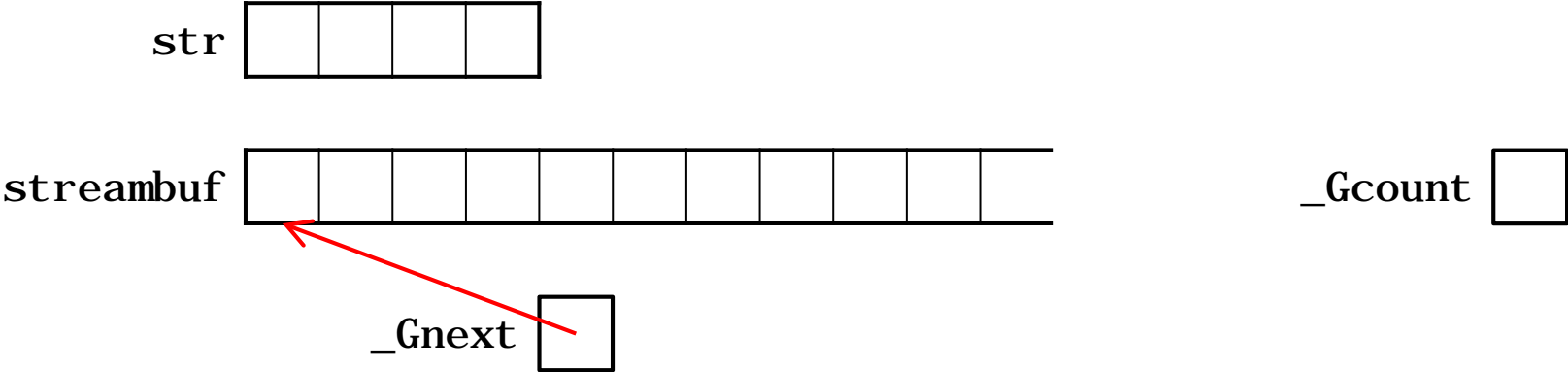
number | 56 |

streambuf | | | | | | | | | | | |

```
12\n
34\n
56
```

File

inFile.good()	true
inFile.eof()	true
inFile.fail()	true
inFile.bad()	false

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str

streambuf

_Gcount

_Gnext

ab\n
cd\n
ef\n

File

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str | | | | |

streambuf | a | b | \n | c | d | \n | e | f | \n | | |

_Gcount | 9 |

_Gnext | |

File
```
ab\n
cd\n
ef\n
```

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 4 ];
inFile >> str;
inFile >> str;
inFile >> str;
inFile >> str;
```

str | a | b | \0 | |

streambuf | a | b | \n | c | d | \n | e | f | \n | | | _Gcount | 7 |

_Gnext | |

File
ab\n
cd\n
ef\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

If the state of streambuf is good, and the first character in streambuf is not `'\n'`, then after the execution of

– `inFile.get`, `'\n'` is not removed from streambuf,

– `inFile.getline`, `'\n'` is removed from streambuf if found,

– `inFile.getline`, the state of streambuf is set to fail if `'\n'` is not found,

– `inFile >>`, `'\n'` is not removed from streambuf.

If the state of streambuf is good, and the first character in streambuf is `'\n'`, then the execution of

– `inFile.get` leaves `'\n'` in streambuf, reads nothing and changes the state to fail,

– `inFile.getline` removes `'\n'` from streambuf, reads an empty string and keeps the state good,

– `inFile >>` removes `'\n'` from streambuf, do correct read operation and keeps the state good.